

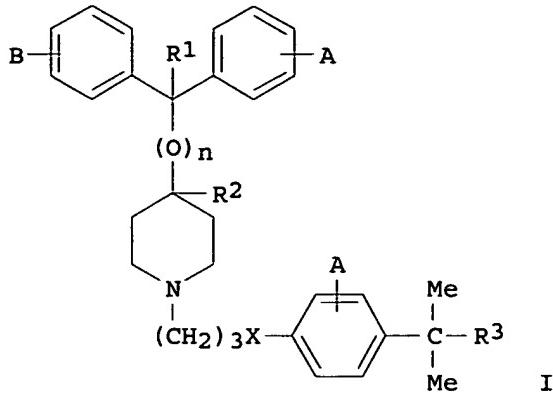
=> s cunninghamel?(l)bainie?
1035 CUNNINGHAMEL?
290 BAINIE?
L2 45 CUNNINGHAMEL?(L)BAINIE?

=> s l2 and piperidin?
91252 PIPERIDIN?
L3 1 L2 AND PIPERIDIN?

=> d bib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:505445 CAPLUS
DN 137:78004
TI Process for the production of piperidinylhydroxybutylphenyldimethylacetates via microbial oxidation.
IN Michels, Peter C.; Zirbes, Eric L.
PA USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. Ser. No. 708,959.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002087003	A1	20020704	US 2001-754786	20010104
	US 6613907	B2	20030902		
	CA 2427387	AA	20021024	CA 2001-2427387	20011106
	WO 2002083062	A2	20021024	WO 2001-US43714	20011106
	WO 2002083062	A3	20030103		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1339864	A2	20030903	EP 2001-273746	20011106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004522454	T2	20040729	JP 2002-580867	20011106
	BR 2001015191	A	20041214	BR 2001-15191	20011106
	NZ 526040	A	20051028	NZ 2001-526040	20011106
	NO 2003001974	A	20030613	NO 2003-1974	20030430
	US 2005038254	A1	20050217	US 2003-638841	20030811
PRAI	US 2000-708959	A2	20001108		
	US 2001-754786	A	20010104		
	WO 2001-US43714	W	20011106		
OS	CASREACT 137:78004;	MARPAT 137:78004			
GI					



AB Title compds. [I; n = 0, 1; R1 = H, OH; R2 = H; or, when n = 0, R1R2 = bond; provided that when n = 1, R1 and R2 both = H; R3 = CO2H, CO2R4; R4 = alkyl, aryl; A, B, D = H, halo, alkyl, OH, alkoxy; X = CO, CH(OH)], were prepared by incubating I (R3 = Me; other variables as above) with a microorganism of a genus selected from Streptomyces, Stemphylium, Gliocladium, Bacillus, Botrytis, Cyathus, Rhizopus, Pycniodospora, Pseudomonas, Helicostylum, Aspergillus, Mucor, Gelasinospora, Rhodotorula, Candida, Mycobacterium, or Penicillium. Alternatively, the microorganism can be Cunninghamella bainieri. Thus, terfenadine was incubated with Streptomyces rimosus NRRL-2234 in a soybean flour medium at 29° to give a product containing 76% terfenadine acid metabolite.

=> s cunninghamel? and (terfen? or fexofena?)

1035 CUNNINGHAMEL?

1768 TERFEN?

545 FEXOFENA?

L4 4 CUNNINGHAMEL? AND (TERFEN? OR FEXOFENA?)

=> d bib abs hit 1-4

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:505445 CAPLUS

DN 137:78004

TI Process for the production of piperidinylhydroxybutylphenyldimethylacetate s via microbial oxidation.

IN Michels, Peter C.; Zirbes, Eric L.

PA USA

SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. Ser. No. 708,959.

CODEN: USXXCO

DT Patent

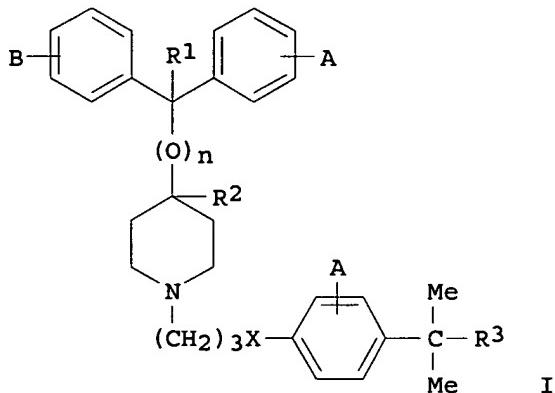
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002087003	A1	20020704	US 2001-754786	20010104
	US 6613907	B2	20030902		
	CA 2427387	AA	20021024	CA 2001-2427387	20011106
	WO 2002083062	A2	20021024	WO 2001-US43714	20011106
	WO 2002083062	A3	20030103		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 EP 1339864 A2 20030903 EP 2001-273746 20011106
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 JP 2004522454 T2 20040729 JP 2002-580867 20011106
 BR 2001015191 A 20041214 BR 2001-15191 20011106
 NZ 526040 A 20051028 NZ 2001-526040 20011106
 NO 2003001974 A 20030613 NO 2003-1974 20030430
 US 2005038254 A1 20050217 US 2003-638841 20030811
 PRAI US 2000-708959 A2 20001108
 US 2001-754786 A 20010104
 WO 2001-US43714 W 20011106
 OS CASREACT 137:78004; MARPAT 137:78004
 GI



- AB Title compds. [I; n = 0, 1; R1 = H, OH; R2 = H; or, when n = 0, R1R2 = bond; provided that when n = 1, R1 and R2 both = H; R3 = CO2H, CO2R4; R4 = alkyl, aryl; A, B, D = H, halo, alkyl, OH, alkoxy; X = CO, CH(OH)], were prepared by incubating I (R3 = Me; other variables as above) with a microorganism of a genus selected from Streptomyces, Stemphylium, Gliocladium, Bacillus, Botrytis, Cyathus, Rhizopus, Pycnidiosphora, Pseudomonas, Helicostylum, Aspergillus, Mucor, Gelasinospora, Rhodotorula, Candida, Mycobacterium, or Penicillium. Alternatively, the microorganism can be Cunninghamella bainieri. Thus, terfenadine was incubated with Streptomyces rimosus NRRL-2234 in a soybean flour medium at 29° to give a product containing 76% terfenadine acid metabolite.
- AB Title compds. [I; n = 0, 1; R1 = H, OH; R2 = H; or, when n = 0, R1R2 = bond; provided that when n = 1, R1 and R2 both = H; R3 = CO2H, CO2R4; R4 = alkyl, aryl; A, B, D = H, halo, alkyl, OH, alkoxy; X = CO, CH(OH)], were prepared by incubating I (R3 = Me; other variables as above) with a microorganism of a genus selected from Streptomyces, Stemphylium, Gliocladium, Bacillus, Botrytis, Cyathus, Rhizopus, Pycnidiosphora, Pseudomonas, Helicostylum, Aspergillus, Mucor, Gelasinospora, Rhodotorula, Candida, Mycobacterium, or Penicillium. Alternatively, the microorganism can be Cunninghamella bainieri. Thus, terfenadine was incubated with Streptomyces rimosus NRRL-2234 in a soybean flour medium at 29° to give a product containing 76% terfenadine acid metabolite.
- ST carboxyterfenadine prep; benzeneacetate hydroxy hydroxydiphenylmethyl piperidinylbutyl dimethyl microbial prep; terfenadine microbial oxidn; piperidinylhydroxybutylphenyldimethylacetate prep
- IT Absidia spinosa

Aspergillus
Bacillus (bacterium genus)
Bacillus cereus
Botrytis
Candida
 Cunninghamella bainieri
 Cunninghamella echinulata
Cyathus (fungus)
Fermentation
Gelasinospora
Gliocladium
 Gliocladium deliquescens
Helicostylum
Mucor
Mycobacterium
Penicillium
Pseudomonas
Pycnidiphora
Rhizopus
 Rhizopus oryzae
Rhodotorula
Stemphylium
Streptomyces
 Streptomyces catenulae
 Streptomyces cavourensis
 Streptomyces griseus
 Streptomyces rimosus
Ulocladium consortiale
Westerdykella dispersa

(process for production of piperidinylhydroxybutylphenyldimethylacetates
via microbial oxidation)

IT 83799-24-0P, Terfenadine acid metabolite
RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); BIOL
(Biological study); PREP (Preparation)
(process for production of piperidinylhydroxybutylphenyldimethylacetates
via microbial oxidation)

IT 50679-08-8, Terfenadine
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for production of piperidinylhydroxybutylphenyldimethylacetates
via microbial oxidation)

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:706359 CAPLUS

DN 133:280646

TI Procedure for the biocatalyzed regioselective oxidation of
terfenadine

IN Schmitz, Guenther; Takors, Rald; Weuster-Botz, Dirk; Wandrey, Christian
PA Forschungszentrum Julich G.m.b.H., Germany

SO Ger. Offen., 10 pp.

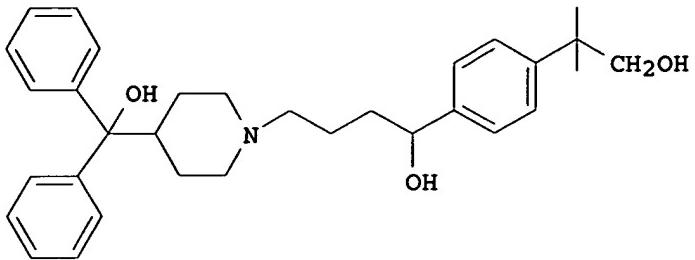
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19913862	A1	20001005	DE 1999-19913862	19990326
	DE 19913862	C2	20030410		
PRAI	DE 1999-19913862		19990326		
GI					



I

AB A process is provided for the biocatalytic conversion and separation of a racemic compound that has low water solubility in a membrane coupled bioreactor.

In this process the substrate compound which is in microcryst. form and the biocatalyst are retained in the bioreactor while the product is removed via crossflow filtration. Thus terfenadine was biocatalyzed by Cunninghamella blakesleeana to an alc. (I) in a membrane coupled stirred tank fermentor. The alc. I was then removed from the fermentor through coupled crossflow filter membrane while the microbial cells and microcryst. terfenadine were retained. After eighty hours of fermentation, the concentration of I rose to ~ 200 mg/l and removed at this level for

the remaining 120 h of fermentation A total of 900 mg/l of I was produced over the course of the fermentation The alc. produced, I, was recovered from the permeate by ion exchange chromatog. Also in the scope of the invention is the conversion of I to the carboxylic acid fexofenadine which is facilitated by the activation of the tert-Bu group of terfenadine to an alc. by the regioselective oxidation

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Procedure for the biocatalyzed regioselective oxidation of terfenadine

AB A process is provided for the biocatalytic conversion and separation of a racemic compound that has low water solubility in a membrane coupled bioreactor.

In this process the substrate compound which is in microcryst. form and the biocatalyst are retained in the bioreactor while the product is removed via crossflow filtration. Thus terfenadine was biocatalyzed by Cunninghamella blakesleeana to an alc. (I) in a membrane coupled stirred tank fermentor. The alc. I was then removed from the fermentor through coupled crossflow filter membrane while the microbial cells and microcryst. terfenadine were retained. After eighty hours of fermentation, the concentration of I rose to ~ 200 mg/l and removed at this level for

the remaining 120 h of fermentation A total of 900 mg/l of I was produced over the course of the fermentation The alc. produced, I, was recovered from the permeate by ion exchange chromatog. Also in the scope of the invention is the conversion of I to the carboxylic acid fexofenadine which is facilitated by the activation of the tert-Bu group of terfenadine to an alc. by the regioselective oxidation

ST Cunninghamella terfenadine biooxidn membrane sepn

IT Cunninghamella blakesleeana
(biocatalyzed regioselective oxidation of terfenadine)

IT Oxidation
(biol.; biocatalyzed regioselective oxidation of terfenadine)

IT Fermentation apparatus
(cell recycle fermentor, crossflow membrane coupled; biocatalyzed regioselective oxidation of terfenadine)

IT Fermentation
(fed-batch; biocatalyzed regioselective oxidation of terfenadine)

IT Oxidation
(regioselective; biocatalyzed regioselective oxidation of terfenadine)

IT 83799-24-0P, Fexofenadine
RL: BMF (Bioindustrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(biocatalyzed regioselective oxidation of terfenadine)

IT 76815-56-0P
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(biocatalyzed regioselective oxidation of terfenadine)

IT 50679-08-8, Terfenadine
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(biocatalyzed regioselective oxidation of terfenadine)

IT 67-56-1, Methanol, uses 67-68-5, DMSO, uses 68-12-2, DMF, uses
RL: NUU (Other use, unclassified); USES (Uses)
(biocatalyzed regioselective oxidation of terfenadine)

IT 37380-42-0, XAD-4
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(biocatalyzed regioselective oxidation of terfenadine)

IT 9003-07-0, Polypropylene
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(membrane composition; biocatalyzed regioselective oxidation of terfenadine)

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:505927 CAPLUS
DN 133:334093
TI Regioselective oxidation of terfenadine with Cunninghamella blakesleeana
AU Schmitz, G.; Franke, D.; Stevens, S.; Takors, R.; Weuster-Botz, D.; Wandrey, C.
CS Institute of Biotechnology, Research Centre Juelich, Julich, D-52428, Germany
SO Journal of Molecular Catalysis B: Enzymatic (2000), 10(1-3), 313-324
CODEN: JMCEF8; ISSN: 1381-1177
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 133:334093
AB The regioselective oxidation of terfenadine with the fungi Cunninghamella blakesleeana was studied as a biochem. alternative for the chemical synthesis of the antihistaminic drug fexofenadine. It was demonstrated that C. blakesleeana oxidizes the tert-Bu group of terfenadine to the corresponding alc. 1-[4-(1,1-dimethyl-2-hydroxyethyl)phenyl]-4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-butanol. A continuous process for regioselective oxidation of terfenadine was developed. Terfenadine was supplied micro-crystalline due to the low solubility in water. Optimum reaction conditions with respect to medium composition, temperature, pH, pO₂, co-substrate and feeding rates were found by means of reaction engineering studies. A cross-flow microfiltration unit was operated in a bypass of a lab-scale stirred tank reactor for retention of the biocatalysts and the micro-crystalline substrate. The alc. was continuously removed with the filtrate to minimize product inhibition. Continuous biotransformation of micro-crystalline terfenadine with C. blakesleeana in the membrane reactor system with a dilution rate of 33 h at co-substrate concns. of about 1 up to 3 g/l glycerol in the reactor resulted in a space-time yield of 145 mg of alc./l/day and an alc. yield of 71%. The produced alc. was easily

isolated from the filtrate by adsorption on XAD-4 resin followed by elution with methanol (concentration factor 7).

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Regioselective oxidation of terfenadine with Cunninghamella blakesleeana

AB The regioselective oxidation of terfenadine with the fungi Cunninghamella blakesleeana was studied as a biochem. alternative for the chemical synthesis of the antihistaminic drug fexofenadine. It was demonstrated that C. blakesleeana oxidizes the tert-Bu group of terfenadine to the corresponding alc. 1-[4-(1,1-dimethyl-2-hydroxyethyl)phenyl]-4-[4-(hydroxydiphenylmethyl)-1-piperidinyl]-1-butanol. A continuous process for regioselective oxidation of terfenadine was developed. Terfenadine was supplied micro-crystalline due to the low solubility in water. Optimum reaction conditions

with respect to medium composition, temperature, pH, pO₂, co-substrate and feeding

rates were found by means of reaction engineering studies. A cross-flow microfiltration unit was operated in a bypass of a lab-scale stirred tank reactor for retention of the biocatalysts and the micro-crystalline substrate. The alc. was continuously removed with the filtrate to minimize product inhibition. Continuous biotransformation of micro-crystalline terfenadine with C. blakesleeana in the membrane reactor system with a dilution rate of 33 h at co-substrate concns. of about 1 up to 3 g/l glycerol in the reactor resulted in a space-time yield of 145 mg of alc./l/day and an alc. yield of 71%. The produced alc. was easily isolated from the filtrate by adsorption on XAD-4 resin followed by elution with methanol (concentration factor 7).

ST Cunninghamella terfenadine regioselective oxidn

IT Oxidation

(biol.; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Fermentation apparatus

(cell recycle fermentor, with a crossflow membrane filter; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Fermentation

(continuous; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Yeast

(extract; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Fermentation

(fed-batch; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Soybean (Glycine max)

Soybean (Glycine max)
(flour; regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Cunninghamella blakesleeana

(regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Lecithins

Soybean oil

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Polyoxyalkylenes, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process)
(regioselective oxidation of terfenadine with Cunninghamella blakesleeana)

IT Oxidation

(regioselective; regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT Flours and Meals
 Flours and Meals
 (soybean; regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT Optimization
 (statistical; regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 101-84-8, Diphenyl ether 106-42-3, p-Xylene, biological studies
 111-87-5, 1-Octanol, biological studies 112-12-9, 2-Undecanone
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 76815-56-0P
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP
 (Preparation)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose, biological
 studies 56-81-5, Glycerol, biological studies 57-48-7, D-Fructose,
 biological studies 59-23-4, D-Galactose, biological studies 64-19-7,
 Acetic acid, biological studies 69-65-8, Mannitol 77-92-9, Citric
 acid, biological studies 544-76-3, Hexadecane 7782-44-7, Oxygen,
 biological studies 9005-25-8, Starch, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 50679-08-8, Terfenadine
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT
 (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or
 reagent)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 83799-24-0, Fexofenadine
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)
 IT 64-17-5, Ethanol, processes 67-56-1, Methanol, processes 67-68-5,
 DMSO, processes 68-12-2, DMF, processes 123-95-5 25322-68-3,
 Polyethylene glycol
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (regioselective oxidation of terfenadine with
Cunninghamella blakesleeana)

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:614162 CAPLUS

DN 131:213195

TI Novel method for preparing fexofenadine

IN Azerad, Robert; Biton, Jacques; Lacroix, Isabelle

PA Hoechst Marion Roussel, Fr.

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9947693	A1	19990923	WO 1999-FR625	19990318
	W:	AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 FR 2776302 A1 19990924 FR 1998-3349 19980319
 FR 2776302 B1 20020412
 AU 9928427 A1 19991011 AU 1999-28427 19990318
 EP 1062358 A1 20001227 EP 1999-909036 19990318
 EP 1062358 B1 20030604
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
 JP 2002506653 T2 20020305 JP 2000-536876 19990318
 AT 242333 E 20030615 AT 1999-909036 19990318
 PT 1062358 T 20031031 PT 1999-909036 19990318
 ES 2196783 T3 20031216 ES 1999-909036 19990318
 US 6558931 B1 20030506 US 2000-646517 20001031
 PRAI FR 1998-3349 A 19980319
 WO 1999-FR625 W 19990318
 AB The invention concerns a method for preparing fexofenadine from terfenadine by a bioconversion process using Absidia corymbifera LCP 63-1800 or Streptomyces platensis NRRL 2364 strain.
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT
 TI Novel method for preparing fexofenadine
 AB The invention concerns a method for preparing fexofenadine from terfenadine by a bioconversion process using Absidia corymbifera LCP 63-1800 or Streptomyces platensis NRRL 2364 strain.
 ST terfenadine Absidia Streptomyces fexofenadine fermn
 IT Absidia
 Absidia corymbifera
 Actinomucor elegans
 Cunninghamella
 Fermentation
 Streptomyces
 Streptomyces platensis
 (preparing fexofenadine from terfenadine by Absidia corymbifera or Streptomyces platensis)
 IT 50679-08-8P, Terfenadine
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparing fexofenadine from terfenadine by Absidia corymbifera or Streptomyces platensis)
 IT 76815-56-0
 RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
 (preparing fexofenadine from terfenadine by Absidia corymbifera or Streptomyces platensis)
 IT 83799-24-0, Fexofenadine
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
 (preparing fexofenadine from terfenadine by Absidia corymbifera or Streptomyces platensis)
 IT 213013-68-4P 213013-69-5P, Terfenadine phosphate
 RL: BYP (Byproduct); PREP (Preparation)
 (preparing fexofenadine from terfenadine by Absidia corymbifera or Streptomyces platensis)